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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,203	05/19/2000	Christian Goerigk	225/48876	7270

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EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/574,203

Applicant(s)

GOERIGK ET AL.

Examiner

Hien Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1 and 3-9 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1, 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 10-14 it is unclear as to how the deflector plate can be a heat source, what part of the deflector plate forms the heat source; in lines 12-13 it is unclear as to what is intended by "broad faces", where they are disclosed in the specification and also "broad" is a relative term and therefore is vague and indefinite.

In claim 3, line 2 "the baffle plate" has no clear antecedent basis and it is unclear as to how the surface of the baffle plate is related to the "broad faces" set forth in claim 1.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 555,746.

With respect to claims 1, 3, 6, EP 555,746 discloses an apparatus comprising:

a nitrogen oxide reduction catalytic converter 5 for reducing nitrogen oxides contained in an exhaust gas 12 from the diesel engine;

a reducing agent metering device for metered addition of the reducing agent or a reducing agent precursor 6 to the exhaust gas 12;

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wherein said reducing agent metering device comprises:

a feed unit 9;

a vaporizer 34 arranged upstream of the nitrogen reduction catalytic converter 5;

and

a heat source disposed in the exhaust gas and comprising a deflector plate 20 being oriented with its "broad faces" parallel to a direction of flow of exhaust gas (note that the gas flow pattern conforms with the corrugated pattern of the plate); wherein the reducing agent 6 is directed under pressure at a substantially perpendicular angle onto one of the broad faces of the plate (Figs. 1-2, pages 2, 13, etc.).

With respect to claim 5, EP 555,746 further discloses two catalytic converter stages 5, 35 connected in series wherein each stage has a different reducing agent storage capacity and wherein at least one of the stages forms the nitrogen oxide reduction catalytic converter 35.

Instant claims 1, 3, 5-6 structurally read on the apparatus of EP 555,746.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 555,746 in view of DE 199 13 462.

The apparatus of EP 555,746 is substantially the same as that of the instant claims, but fails to disclose whether the baffle plate may be disposed in a part-flow branch line and the exhaust gas flows through a main-flow exhaust system.

However, at the time of the invention was made, it would have been obvious to one skilled in the art to select an appropriate location for the baffle plate since positioning the parts of the apparatus is no more than a design choice as evidenced by DE 199 13 462, and well within the knowledge of one skilled in the art provided that it would facilitate the evaporation of urea solution thereof, absence showing any unexpected results and since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Response to Arguments

7. Applicant's arguments filed 7/28/04 have been fully considered but they are not persuasive.

Applicants argue that the instant invention discloses provision of a deflector plate arranged substantially parallel to the exhaust flow so that the reducer directly impinges on the broad face of the plate, while the reducer impinges onto an edge of the plate in the EP 555,746. Such contention is not persuasive as EP 555,746 does disclose a deflector plate (wall 20)

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disposed substantially parallel to the exhaust flow in which the reducer impinges on the broad face of the plate as well as the edge of the plate.

Applicants argue that only a small fraction of the reducer contacts the knife-edged ends of the plate. Such contention is not persuasive as the language of the claim does not exclude such small fraction of the reducer.

Applicants argue that neither the knife-edged ends of the plate nor the small ridges of corrugations in the plate in EP 555,746 could be the "broad faces" as recited in the instant claims. Such contention is not persuasive as the broad faces of the plate 20 in EP 555,746 include ridges of corrugations and therefore meet the instant claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Hien Tran

HT
October 12, 2004

Hien Tran
Primary Examiner
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